WHAT IS CLAIMED IS:

1. An optical head device comprising:

a first light source which emits a first laser beam;

a second light source which emits a second laser beam with a wavelength different from a wavelength of the first laser beam;

a common optical path for guiding the first laser beam or the second laser beam emitted from the first light source or the second light source respectively to an optical recording medium; and

a diffraction element disposed on the common optical path, the diffraction element comprising:

a first diffraction grating formed in a partial area on an incident face or an emitting face of the diffraction element such that the first laser beam is diffracted and the second laser beam is transmitted without being diffracted; and

a second diffraction grating formed in a partial area on the incident face or the emitting face of the diffraction element such that the second laser beam is diffracted and the first laser beam is transmitted.

2. The optical head device according to claim 1, wherein the diffraction element includes a translucent substrate on which a first diffraction grating formed area where the first diffraction grating is formed and a second diffraction grating formed area where the second diffraction grating is formed are dividedly provided on a same side face of the translucent substrate.

3. The optical head device according to claim 2, wherein the first diffraction grating formed area and the second diffraction grating formed area are formed so as to be divided in a stripe shape.

4. The optical head device according to claim 2, wherein the first diffraction grating formed area and the second diffraction grating formed area are formed so as to be divided in a concentrically circular shape.

5. The optical head device according to claim 4, wherein each of the first diffraction grating formed area and the second diffraction grating formed area are divided into plural areas and the first diffraction grating formed area and the second diffraction grating formed area are positioned alternately.

6. The optical head device according to claim 2, wherein the first diffraction grating formed area and the second diffraction grating formed area are formed so as to be divided in a matrix shape.

7. The optical head device according to claim 1, wherein the diffraction element is formed of a translucent substrate having a first face which is divided into a first diffraction grating formed area where the first diffraction grating is formed and a transmitting area where the first laser beam is not diffracted and having a second face which is divided into a second diffraction grating formed area where the second diffraction grating is formed and a transmitting area where the second laser beam is not diffracted, and the first face and the second face are opposite to each other.

8. The optical head device according to claim 7, wherein the first diffraction grating formed area and the second diffraction grating formed area are formed in a concentrically circular shape.

9. The optical head device according to claim 8, wherein the first diffraction grating formed area is wider than an effective diameter of the first laser beam passing through the first diffraction grating formed area and the second diffraction grating formed area is wider than an effective diameter of the second laser beam passing through the second diffraction grating formed area.

10. The optical head device according to claim 1, wherein the first diffraction grating and the second diffraction grating are respectively formed of a plurality of steps with a predetermined height.

11. The optical head device according to claim 10, wherein a step height of the first diffraction grating is set to satisfy an equation "$a\lambda 2/(n-1)$" and a step of the second diffraction grating is set to satisfy an expression "$b\lambda 1/(n-1)$, wherein "$\lambda 1$" is a wavelength of the first laser beam, "$\lambda 2$" is a wavelength of the second laser beam, "n" is a refractive index of the translucent substrate, and "a" and "b" are respectively an integer number not less than "1"

12. The optical head device according to claim 1, wherein an optical component of the first laser beam diffracted by the first diffraction grating is set to be in phase with an optical component of the first laser beam transmitted through the second diffraction grating.

13. The optical head device according to claim 1, wherein a wavelength of the first laser beam is shorter than a wavelength of the second laser beam, and the diffraction element is provided with an area which does not diffract the first laser beam at a center portion including an optical axis.

14. The optical head device according to claim 1, wherein the diffraction element is disposed on the common optical path at a position where the first laser beam and the second laser beam toward the optical recording medium pass through and return lights of the first laser beam and the second laser beam reflected by the optical recording medium do not pass through.

15. A diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

a translucent substrate constituting the diffraction element;

a first diffraction grating formed area which is formed in a partial area on one face of the translucent substrate in such a manner that the first diffraction grating which diffracts the first laser beam and transmits the second laser beam without diffracting is formed; and

a second diffraction grating formed area which is formed in a partial area on the one face of the translucent substrate in such a manner that the second diffraction grating which diffracts the second laser beam and transmits the first laser beam without diffracting is formed.

16. A diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

a translucent substrate constituting the diffraction element;

one face of the translucent substrate divided into a first diffraction grating formed area where the first diffraction grating which diffracts the first laser beam and transmits the second laser beam without diffracting is formed and an area which does not diffract the first laser beam; and

the other face of the translucent substrate opposite to the one face of the translucent substrate divided into a second diffraction grating formed area where the second diffraction grating which diffracts the second laser beam and transmits the first laser beam without diffracting is formed and an area which does not diffract the second laser beam.

17. A diffraction element in which a first laser beam, a second laser beam and a third laser beam respectively having different wavelengths from one another are capable of being incident, comprising:

a translucent substrate constituting the diffraction element;

one face of the translucent substrate divided into a first diffraction grating formed area where the first diffraction grating which diffracts the first laser beam with a predetermined diffraction efficiency is formed and an area which does not diffract the second laser beam and the third laser beam; and

the other face of the translucent substrate opposite to the one face of the translucent substrate divided into a second diffraction grating formed area where the second diffraction grating which diffracts the second laser beam with a predetermined diffraction efficiency and transmits the third laser beam without diffracting is formed, a third diffraction grating formed area where the third diffraction grating which diffracts the third laser beam with a predetermined diffraction efficiency and transmits the second laser beam without diffracting is formed, and an area which does not diffract the first laser beam.

18. A manufacturing method for a diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

providing a molding die for molding the diffraction element;

forming first grooves, which are used to form a first diffraction grating in a partial area on an incident face or an emitting face of the diffraction element such that the first laser beam is diffracted and the second laser beam is transmitted without being diffracted, on the molding die by cutting work;

forming second grooves, which are used to form a second diffraction grating in a partial area on the incident face or the emitting face of the diffraction element such that the second laser beam is diffracted and the first laser beam is transmitted without being diffracted, on the molding die by cutting work; and then

molding the diffraction element by using the molding die.

19. The manufacturing method for a diffraction element according to claim 18, wherein the first grooves and the second grooves are respectively formed on a fixed side mold member of the molding die.

20. A manufacturing method for a diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

providing a translucent substrate for constituting the diffraction element;

forming first grooves on the translucent substrate by cutting work for a first diffraction grating in a partial area such that the first laser beam is diffracted and the second laser beam is transmitted without being diffracted; and

forming second grooves on the translucent substrate by cutting work for a second diffraction grating in a partial area such that the second laser beam is diffracted and the first laser beam is transmitted without being diffracted.

21. A manufacturing method for a diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

providing a molding die for molding the diffraction element;

forming first grooves, which are used to form a first diffraction grating formed area on one face of the diffraction element partially such that the first laser beam is diffracted and the

second laser beam is transmitted without being diffracted, on the molding die by cutting work in such a manner that the one face of the diffraction element is divided into the first diffraction grating formed area and an area where the first laser beam is not diffracted;

forming second grooves, which are used to form a second diffraction grating formed area on the other face of the diffraction element partially such that the second laser beam is diffracted and the first laser beam is transmitted without being diffracted, on the molding die by cutting work in such a manner that the other face of the diffraction element is divided into the second diffraction grating formed area and an area where the second laser beam is not diffracted; and then

molding the diffraction element by using the molding die.

22. A manufacturing method for a diffraction element in which a first laser beam and a second laser beam having a wavelength different from a wavelength of the first laser beam are capable of being incident, comprising:

providing a translucent substrate for constituting the diffraction element;

forming first grooves for a first diffraction grating formed area on one face of the translucent substrate partially such that the first laser beam is diffracted and the second laser beam is transmitted without being diffracted by cutting work in such a manner that the one face of the translucent substrate is divided into the first diffraction grating formed area and an area where the first laser beam is not diffracted; and

forming second grooves for a second diffraction grating formed area on the other face of the translucent substrate partially such that the second laser beam is diffracted and the first laser beam is transmitted without being diffracted by cutting work in such a manner that the other face of the diffraction element is divided into the second diffraction grating formed area and an area where the second laser beam is not diffracted.